MONTHLY WEATHER REVIEW.

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DIVISION OF TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

INTRODUCTION.

This REVIEW presents a general summary of the meteorological data collected by the Signal Service during the month of September, 1882.

A special feature of the meteorology of the month has been the tropical hurricane charted as low area ii. It is remarkable for the violence of the winds near its centre, and for the great loss of property on land and sea. This cyclone presents the not unusual features of tropical hurricanes which have crossed land; on two occasions there were observed in the vortex of the storm, tired land birds of many varieties imprisoned and unable, on account of the violence of the winds, to escape. These birds therefore must have been on the wing at least the three days that it took the cyclone to travel from Cuba to the Gulf states.

The other marked features of the month have been:

1st: The excessive rains which fell along the New England and middle Atlantic coasts in connection with low area iv. These heavy rains resulted in very destructive freshets in the rivers and smaller streams, and caused the large excess over the mean rainfall in New England and the middle Atlantic states.

2d: The very hot and dry winds which prevailed over Kansas and Missouri on the 12th, 13th, and 14th. The temperatures recorded during the prevalence of these winds were, at many places, the highest ever observed in September, and are specially noted in the REVIEW under the heading "high temperatures."

That part of the REVIEW referring to International Meteorology presents the general weather conditions which prevailed over the northern hemisphere during the month of July, 1880. The prominent characteristics of that month was the prevalence of barometric maxima over the Atlantic ocean, and the absence of storms in that region. In Europe, hail-storms were of unusual frequency and severity during the month. Chart v. exhibits the paths of barometric minima for October, 1880, and will be found interesting as showing the tracks of the two disastrous storms that swept over Europe during the month. A noteworthy feature of the chart is the unusually large number of barometric minima, shown over northern Europe. On this chart are also exhibited the tracks of three typhoons that occurred over the China sea during the month.

In the preparation of this REVIEW, the following data received up to October 20th, have been used; viz.: the regular tri-daily weather charts, containing the data of simultaneous observations taken at one hundred and thirty-six Signal Service stations and fifteen Canadian stations, as telegraphed to this office; one hundred and ninety-four monthly journals and one hundred and eighty-two monthly means from the former, and twelve monthly means from the latter; two hundred monthly registers from voluntary observers; sixty-one monthly registers from United States Army Post Surgeons; Marine Records; International Simultaneous Observations; Marine Reports, through the co-operation of the "New York Herald," Weather Service; abstracts of Ships' Logs, furnished by the publishers of "The New York Maritime Register;" monthly reports from the local weather services of Kansas, Nebraska, and Missouri, and of the Central Pacific railway company; trustworthy newspaper extracts; and special reports.

BAROMETRIC PRESSURE.

[*Readings expressed in inches and hundredths.*]

The mean barometric pressure for the month over the United States and Canada, is shown by the isobarometric lines (in black) on chart number ii. The area of lowest mean-pressure covers the western parts of the middle and southern plateau districts, the lowest mean (29.84) being reported from Campo. From an examination of chart number ii., for previous months, it will be seen that, since March, the region of lowest mean-pressure has occupied nearly the same position. East of the one-hundredth meridian, the pressure is very evenly distributed. From the Missouri valley eastward to New England, the pressures range from 30.05 to 30.09; and in the Gulf states from 30.01 to 30.07. Compared with the previous month, the pressure is higher in almost every district; the most marked increase (0.16) occurring at Santa Fé. East of the Rocky mountains, the increase ranges from 0.01, to 0.11 being greatest at the more northerly stations. In Florida there has been a decrease of from 0.04 to 0.06, while along the Gulf coast the pressure has remained nearly the same. In the north Pacific coast region and in the western part of the northern plateau district, a slight decrease, ranging from 0.01 to 0.03, has also occurred. In California, there has been an increase of from 0.01 to 0.05, the greatest being reported from Campo.

DEPARTURES FROM THE NORMAL VALUES FOR THE MONTH.

Compared with the September means of previous years, the pressure in the northern plateau district and in the north Pacific coast region is from 0.01 to 0.05 below the normal, and in Florida, from normal to 0.02 below. With the exception of slight deficiencies at a few scattering stations, the pressure elsewhere over the country, is from normal to 0.16 above, the greatest departures occurring in the upper lake region.